

Notice of Allowability

Application No.

10/628,709

Examiner

Anatoly Vortman

Applicant(s)

KONO ET AL.

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Substitute Appeal Brief of 10/17/06.
2. ☒ The allowed claim(s) is/are 1-28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Anatoly Vortman
Primary Examiner
Art Unit 2835

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

Applicant's arguments presented in the Substitute Appeal Brief of 10/17/2006 have been found persuasive, therefore finality of the Office action of 03/08/06 is hereby withdrawn and all pending claims 1-27 are allowed. Specifically, the Applicant's arguments regarding the unexpected result presented on p. 17 and 18 of the Brief have been found persuasive, i.e.: "As shown in Fig. 6, a sample outside the scope of claim 1, in which the surface layer was 100% tin and which had a thickness of 18 μ m (Sample 13), had a Fusing Temperature Variation of 1.3°C among 10 samples. See, specification, page 4, line 25, to page 5, line 6, for a description of the experiment. In contrast, two samples that are within the scope of claim 1, in which the surface layers were 100% tin and thicknesses of 21 μ m and 14 μ m (Sample 1 and 2, respectively), each had a Fusing Temperature Variation of only 0.6°C among 10 samples. Sample 14, in which the surface layer comprises 37% lead and, thus, falls within AAPA, the closest prior art cited by the Examiner, has a Fusing Temperature Variation of 1.2°C among 10 samples. This 50% or more reduction in Fusing Temperature Variation when the thickness of the surface layer is not greater than 14 μ m thick was unexpected".

Furthermore, Applicant's arguments that Kodama ('234) patent is not analogous art have been found persuasive as well.

Therefore, the allowability resides in the overall structure of the device as recited in sole apparatus independent claim 1 and in the overall method of manufacturing as recited in sole method independent claim 10, and at least in part, because claim 1 recites: "surface layers made

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of metal including tin as a main substance provided on said lead conductors, respectively, said surface layers having thicknesses not greater than $14\mu\text{m}$ " and claim 10 recites: "the surface layers being made of metal including tin as a main substance and having thicknesses not greater than $14\mu\text{m}$ ". The aforementioned limitations in combination with all remaining limitations of the respective claims, are believed to render said independent claims 1 and 10 and all claims dependent therefrom patentable over the art of record.

None of the references cited during prosecution of the instant application either taken alone or in combination, is believed to render the present invention unpatentable as claimed.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Lynn Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AV

A handwritten signature in black ink, appearing to be 'A. Vortman', with a long horizontal stroke extending to the right.

Anatoly Vortman
Primary Examiner
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